



FCC RADIO TEST REPORT

Applicant : CASTLENET TECHNOLOGY INC.
Address : No. 14, Ln. 141, Sec. 3, Beishen Rd., Shenkeng
Dist., New Taipei City 22244, Taiwan (R.O.C.)
Equipment : D3.0 Cable Gateway
Model No. : 1.Infinity401
2.CBV384Z4-AC1600MP
Trade Name : CASTLENET
FCC ID : RK9-INFINITY401

I HEREBY CERTIFY THAT :

The sample was received on Apr. 29, 2021 and the testing was completed on Jul. 26, 2021 at CerpPASS Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of CerpPASS Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Mark Liao / Supervisor

Laboratory Accreditation:

CerpPASS Technology Corporation Test Laboratory





CONTENTS

- 1. Summary of Test Procedure and Test Results 5
 - 1.1. Applicable Standards5
- 2. Test Configuration of Equipment under Test 6
 - 2.1. Feature of Equipment under Test.....6
 - 2.2. Carrier Frequency of Channels 7
 - 2.3. Test Mode and Test Software8
 - 2.4. Description of Test System..... 10
 - 2.5. General Information of Test..... 11
 - 2.6. Measurement Uncertainty 11
- 3. Test Equipment and Ancillaries Used for Tests 12
- 4. Antenna Requirements 14
 - 4.1. Standard Applicable 14
 - 4.2. Antenna Construction and Directional Gain..... 14
- 5. Test of AC Power Line Conducted Emission 15
 - 5.1. Test Limit 15
 - 5.2. Test Procedures 15
 - 5.3. Typical Test Setup 16
 - 5.4. Test Result and Data 17
 - 5.5. Test Photographs 19
- 6. Test of Spurious Emission (Radiated) 20
 - 6.1. Test Limit 20
 - 6.2. Test Procedures 21
 - 6.3. Typical Test Setup 22
 - 6.4. Test Result and Data (9kHz ~ 30MHz)..... 23
 - 6.5. Test Result and Data (30MHz ~ 1GHz)..... 23
 - 6.6. Test Result and Data (1GHz ~ 40GHz)..... 25
 - 6.7. Restricted Bands of Operation 61
 - 6.8. Test Photographs (30MHz ~ 1GHz) 62
 - 6.9. Test Photographs (1GHz ~ 40GHz) 63
- 7. On Time, Duty Cycle and Measurement methods 65
 - 7.1. Test Limit 65
 - 7.2. Test Procedure 65
 - 7.3. Test Setup Layout 65
 - 7.4. Test Result and Data 66
 - 7.5. Measurement Methods 66
- 8. 6dB Bandwidth & 99% Occupied Bandwidth 68
 - 8.1. Test Limit 68
 - 8.2. Test Procedure 68
 - 8.3. Test Setup Layout 68
 - 8.4. Test Result and Data (6dB Bandwidth) 69
 - 8.5. Test Result and Data (99% Occupied Bandwidth) 70
- 9. 26dB Bandwidth & 99% Occupied Bandwidth 83



- 9.1. Test Limit83
- 9.2. Test Procedure83
- 9.3. Test Setup Layout83
- 9.4. Test Result and Data (26dB Bandwidth)84
- 9.5. Test Result and Data (99% Occupied Bandwidth)85
- 10. Average Power.....98
 - 10.1. Test Limit98
 - 10.2. Test Procedure99
 - 10.3. Test Setup Layout99
 - 10.4. Test Result and Data100
- 11. Power Spectral Density101
 - 11.1. Test Limit101
 - 11.2. Test Procedure101
 - 11.3. Test Setup Layout101
 - 11.4. Test Result and Data102
- 12. Radio Frequency Exposure115
 - 12.1. Applicable Standards115
 - 12.2. EUT Specification115
 - 12.3. Test Results115
 - 12.4. Calculation.....116
 - 12.5. Maximum Permissible Exposure117



History of this test report

Report No.	Issue Date	Description
21010191-TRFCC02	Jul. 30, 2021	Original



1. Summary of Test Procedure and Test Results

1.1. Applicable Standards

ANSI C63.10:2013

FCC Rules and Regulations Part 15 Subpart E §15.407

KDB 789033

FCC Rule	Description of Test	Result
15.203	Antenna Requirement	PASS
15.207(a)	AC Power Line Conducted Emission	PASS
15.407(b) 15.209	Radiated Spurious Emission	PASS
15.407(a)	26 dB & Occupied Bandwidth	PASS
15.407	6 dB Bandwidth	PASS
15.407 (a) & (a)(3)	Average Power	PASS
15.407(a)	Power Spectral Density	PASS
2.1091	Radio Frequency Exposure	PASS

*The lab has reduced the uncertainty risk factor from test equipment, environment and staff technicians which according to the standard on contract. Therefore, the test result will only be determined by standard requirement.

*This EUT has been also tested and compiled with the requirement of FCC Part 15, Subpart B, recorded in a separate test report(21010191-TEFV01).



2. Test Configuration of Equipment under Test

2.1. Feature of Equipment under Test

Frequency Range	802.11b/g/n: 2412~2462MHz 802.11a/n/ac:5180-5240MHz, 5745-5825MHz
Modulation Type	2.4GHz: 802.11b: CCK, DQPSK, DBPSK 802.11g/n: BPSK, QPSK, 16QAM, 64QAM 5GHz: 802.11n/a: BPSK, QPSK, 16QAM, 64QAM 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM
Modulation Technology	DSSS, OFDM
Data Rate	WLAN: 2.4GHz: 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS15, HT20/40 5GHz: 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS23, HT20/40 802.11ac: MCS0 – MCS9, VHT20/40/80
Antenna Type	Dipole Antenna
Antenna Gain	2412-2462MHz: ANT A: 3.00dBi, ANT C: 4.82dBi 5180-5240MHz: ANT A :3.00dBi, ANT B :6.20dB, ANT C: 5.88dBi 5745-5825MHz: ANT A :3.00dBi, ANT B :6.20dB, ANT C: 5.88dBi
Adapter	1.Brand:MOSO, Model:MS-V2000R120-024H0-US 2.Brand:AcBel, Model:WAM005

Note:

- 1.802.11b fix ANT A(AJ1) transmit signal.
- 2.EUT not support TPC Function.
- 3.For more details, please refer to the User's manual of the EUT.

Difference description

Model No.	Remark
Infinity401	For market distinction
CBV384Z4-AC1600MP	



2.2. Carrier Frequency of Channels

Band: 5150MHz-5250MHz

802.11a, 802.11n HT20, 802.11ac VHT20,

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*36	5180	44	5220
*40	5200	*48	5240

802.11n HT40, 802.11ac VHT40,

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*38	5190	*46	5230

802.11ac VHT80 ,

Channel	Frequency(MHz)
*42	5210

Band: 5725MHz -5850MHz

802.11a, 802.11n HT20, 802.11ac VHT20,

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*149	5745	161	5805
153	5765	*165	5825
*157	5785		

802.11n HT40, 802.11ac VHT40,

Channel	Frequency(MHz)	Channel	Frequency(MHz)
*151	5755	*159	5795

802.11ac VHT80,

Channel	Frequency(MHz)
*155	5775

Note: Channels remarked * are selected to perform test.



2.3. Test Mode and Test Software

- a. During testing, the interface cables and equipment positions were varied according to ANSI C63.10.
- b. The complete test system included remote workstation and EUT for RF test. The remote workstation included Notebook.
- c. An executive program, " Mtool ver. 2.0.1.0" under Windows OS system was executed to transmit and receive data via WLAN.
- d. The following test modes were performed for the test:

Conducted Emissions from the AC mains power ports	
Test Mode	Operating Description
1	802.11a (6Mbps) Adapter: MS-V2000R120-024H0-US
2	802.11n HT20 (6.5Mbps) Adapter: MS-V2000R120-024H0-US
3	802.11n HT40 (13.5Mbps) Adapter: MS-V2000R120-024H0-US
4	802.11ac VHT20 (6.5Mbps) Adapter: MS-V2000R120-024H0-US
5	802.11ac VHT40 (13.5Mbps) Adapter: MS-V2000R120-024H0-US
6	802.11ac VHT80 (29.3Mbps) Adapter: MS-V2000R120-024H0-US
7	802.11a (6Mbps) Adapter: WAM005
8	802.11n HT20 (6.5Mbps) Adapter: WAM005
9	802.11n HT40 (13.5Mbps) Adapter: WAM005
10	802.11ac VHT20 (6.5Mbps) Adapter: WAM005
11	802.11ac VHT40 (13.5Mbps) Adapter: WAM005
12	802.11ac VHT80 (29.3Mbps) Adapter: WAM005
caused "Test Mode 4" generated the worst case, it was reported as the final data.	
Radiation Emissions (9KHz ~30MHz & 30MHz ~ 1GHz)	
Test Mode	Operating Description
1	802.11a (6Mbps) Adapter: MS-V2000R120-024H0-US
2	802.11n HT20 (6.5Mbps) Adapter: MS-V2000R120-024H0-US
3	802.11n HT40 (13.5Mbps) Adapter: MS-V2000R120-024H0-US
4	802.11ac VHT20 (6.5Mbps) Adapter: MS-V2000R120-024H0-US
5	802.11ac VHT40 (13.5Mbps) Adapter: MS-V2000R120-024H0-US
6	802.11ac VHT80 (29.3Mbps) Adapter: MS-V2000R120-024H0-US
7	802.11a (6Mbps) Adapter: WAM005
8	802.11n HT20 (6.5Mbps) Adapter: WAM005
9	802.11n HT40 (13.5Mbps) Adapter: WAM005
10	802.11ac VHT20 (6.5Mbps) Adapter: WAM005
11	802.11ac VHT40 (13.5Mbps) Adapter: WAM005
12	802.11ac VHT80 (29.3Mbps) Adapter: WAM005
caused "Test Mode 4" generated the worst case, it was reported as the final data.	



Radiation Emissions (1GHz ~ 40GHz)	
Test Mode	Operating Description
1	802.11a (6Mbps) Adapter: MS-V2000R120-024H0-US
2	802.11n HT20 (6.5Mbps) Adapter: MS-V2000R120-024H0-US
3	802.11n HT40 (13.5Mbps) Adapter: MS-V2000R120-024H0-US
4	802.11ac VHT20 (6.5Mbps) Adapter: MS-V2000R120-024H0-US
5	802.11ac VHT40 (13.5Mbps) Adapter: MS-V2000R120-024H0-US
6	802.11ac VHT80 (29.3Mbps) Adapter: MS-V2000R120-024H0-US
7	802.11a (6Mbps) Adapter: WAM005
8	802.11n HT20 (6.5Mbps) Adapter: WAM005
9	802.11n HT40 (13.5Mbps) Adapter: WAM005
10	802.11ac VHT20 (6.5Mbps) Adapter: WAM005
11	802.11ac VHT40 (13.5Mbps) Adapter: WAM005
12	802.11ac VHT80 (29.3Mbps) Adapter: WAM005

caused "Test Mode 1,4~6" generated the worst case, they were reported as the final data.

The EUT incorporates a MIMO function

Modulation Type	TX CONFIGURATION
802.11a	3TX
802.11n HT20	3TX
802.11ac VHT20	3TX
802.11n HT40	3TX
802.11ac VHT40	3TX
802.11ac VHT80	3TX



2.4. Description of Test System

RF Conducted				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
Notebook	ASUS	P2430U	N/A	Adapter / 1.8m / NS
RJ45 Cable	TE CONNECTIVITY	CAT5E	1.2m / NS	N/A
Radiated Emissions				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
Notebook	ASUS	P2430U	N/A	Adapter / 1.8m / NS
RJ45 Cable	TE CONNECTIVITY	CAT5E	15m / NS	N/A
AC Power Line Conducted Emission				
Equipment	Brand	Model	Length/Type	Power cord/Length/Type
Notebook	ASUS	P2430U	N/A	Adapter / 1.8m / NS
RJ45 Cable	TE CONNECTIVITY	CAT5E	15m / NS	N/A

**2.5. General Information of Test**

Test Site	Cerpass Technology Corporation Test Laboratory Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan (R.O.C.) Tel:+886-3-3226-888 Fax:+886-3-3226-881	
	FCC	TW1439, TW1079
	IC	4934E-1, 4934E-2
	VCCI	T-2205 for Telecommunication test C-4663 for Conducted emission test R-4218 for Radiated emission test G-10812, G-10813 for radiated disturbance above 1GHz
Frequency Range Investigated:	Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 40,000MHz	
Test Distance:	The test distance of radiated emission from antenna to EUT is 3 M.	

Test Item	Test Site	Test Period	Environmental Conditions	Tested By
RF Conducted	RFCON01-NK	2021/07/12~2021/07/20	23~26°C / 45~47%	Nick Guan
Radiated Emissions	3M02-NK	2021/07/09~2021/07/12	23~24°C / 45~46%	Nick Guan
AC Power Line Conducted Emission	CON01-NK	2021/07/26	27°C / 50%	Dian Chen

2.6. Measurement Uncertainty

Measurement Item	Uncertainty
AC Power Line Conduction(150K~30MHz)	±3.63dB
Radiated Spurious Emission(9KHz~30MHz)	±3.4dB
Radiated Spurious Emission(30MHz~1GHz)	±5.6dB
Radiated Spurious Emission(1GHz~40GHz)	±6.6dB
6dB Bandwidth	±4.4%
26dB Bandwidth	±4.4%
Occupied Bandwidth	±4.4%
Peak Output Power(Conducted Power Meter)	±1.1dB
Power Spectral Density	±1.8dB
Duty Cycle	±1.5%
Frequency Stability	±0.26KHz



3. Test Equipment and Ancillaries Used for Tests

Test Item	Radiated Emissions				
Test Site	Semi Anechoic Room(3M02-NK)				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
Bilog Antenna	Schwarzbeck	VULB9168	369	2021/04/26	2022/04/25
Active Loop Antenna	EMCO	6507	40855	2021/06/10	2022/06/09
Horn Antenna	EMCO	3115	31601	2020/10/16	2021/10/15
Horn Anrenna	EMCO	3116	31974	2020/09/24	2021/09/23
EMI Receiver	ROHDE & SCHWARZ	ESCI	101423	2021/06/30	2022/06/29
Spectrum Analyzer	ROHDE & SCHWARZ	FSV 40-N	102151	2020/08/03	2021/08/02
Preamplifier	EM Electronics corp.	EM330	60658	2020/10/20	2021/10/19
Preamplifier	EM Electronics corp.	EM330	60660	2021/03/18	2022/03/17
Preamplifier	Agilent	8449B	3008A01954	2021/03/22	2022/03/21
Preamplifier	EMC INSTRUMENTS	EMC184045	980065	2020/11/06	2021/11/05
Bluetooth Tester	ROHDE & SCHWARZ	CBT	101133	2021/04/19	2022/04/18
Cable-3in1(30M-1G)	HARBOUR INDUSTRIES	LL142	CCE1315	2021/04/12	2022/04/11
Cable-0.5m(1G-18G)	EMEC	EM104-SMSM-0.5M	CCE1354	2021/05/06	2022/05/05
Cable-3m(1G-18G)	EMEC	EM104-SMSM-3M	CCE1355	2021/05/06	2022/05/05
Cable-8m(1G-18G)	EMEC	EM104-SMSM-8M	CCE1356	2021/05/06	2022/05/05
Cable-0.5m(30M-40G)	HUBER SUHNER	SUCOFLEX 102	28420/2	2021/04/03	2022/04/02
Cable-3m(30M-40G)	HUBER SUHNER	SUCOFLEX 102	MY2608/2	2021/04/09	2022/04/08
Cable-0.5m(1G-40G)	Rapidtek	40GHZ 50CM	38MS-38MS50314	2021/04/08	2022/04/07
Cable-6m(9k~300M)	NA	EMC5D-BM-BM-6	130605	2020/09/18	2021/09/17
E3	AUDIX	v8.2014-8-6	RK-000529	NA	NA

Test Item	RF Conducted				
Test Site	RFCON01-NK				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
Spectrum Analyzer	ROHDE & SCHWARZ	FSV 40-N	102151	2020/08/03	2021/08/02
Bluetooth Tester	ROHDE & SCHWARZ	CBT	101133	2021/04/19	2022/04/18
CAX Signal Analyzer	KEYSIGHT	N9000B	MY57100339	2020/12/25	2021/12/24
Attenuator	KEYSIGHT	8491B	MY39250703	2021/04/09	2022/04/08
TEMP & HUMI CHAMBER	T-MACHINE	TMJ-9712	T-12-040111	2020/08/25	2021/08/24
Power Meter	Anritsu	ML2495A	1224005	2021/04/14	2022/04/13
Power Sensor	Anritsu	MA2411B	1207295	2021/04/14	2022/04/13



Test Item	AC Power Line Conducted Emission				
Test Site	CON01-NK				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
EMI Receiver	ROHDE & SCHWARZ	ESCI	100821	2020/09/11	2021/09/10
Line Impedance Stabilization Network	Schwarzbeck	NSLK 8127	8127-516	2020/09/26	2021/09/25
Pulse Limiter	ROHDE & SCHWARZ	ESH3-Z2	101933	2020/09/17	2021/09/16
Cable-6m(9k~300M)	NA	EMC5D-BM-BM-6	130605	2020/09/18	2021/09/17
E3	AUDIX	v8.2014-8-6	RK-000531	NA	NA



4. Antenna Requirements

4.1. Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.407 (a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.2. Antenna Construction and Directional Gain

Antenna Type	Dipole Antenna
Antenna Gain	5180-5240MHz: ANT A: 3.00dBi ,ANT B: 6.20dBi, ANT C: 5.88dBi 5745-5825MHz: ANT A: 3.00dBi ,ANT B: 6.20dBi, ANT C: 5.88dBi

5180MHz -5240MHz
For Power directional gain= $G_{ant} = 6.20$ (dBi) For PSD directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 9.91$ (dBi)
5745MHz -5825MHz
For Power directional gain= $G_{ant} = 6.20$ (dBi) For PSD directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / N_{ANT}] = 9.91$ (dBi)



5. Test of AC Power Line Conducted Emission

5.1. Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz, according to the methods defined in ANSI C63.4-2014. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

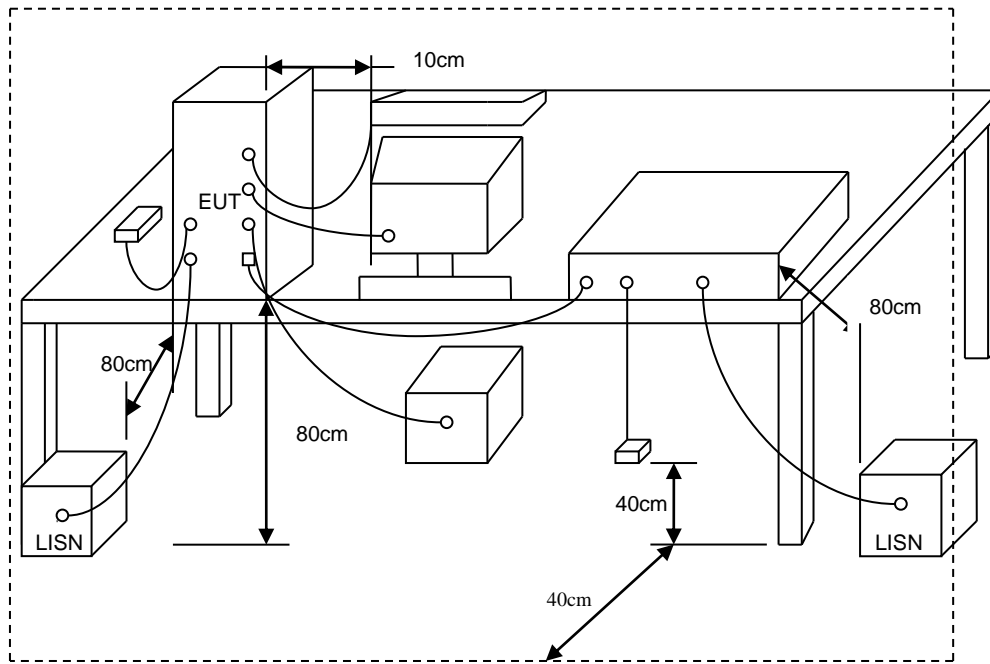
*Decreases with the logarithm of the frequency.

5.2. Test Procedures

- The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- Connect EUT to the power mains through a line impedance stabilization network (LISN).
- All the support units are connecting to the other LISN.
- The LISN provides 50 ohm coupling impedance for the measuring instrument.
- The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
- Both sides of AC line were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched.
- Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.



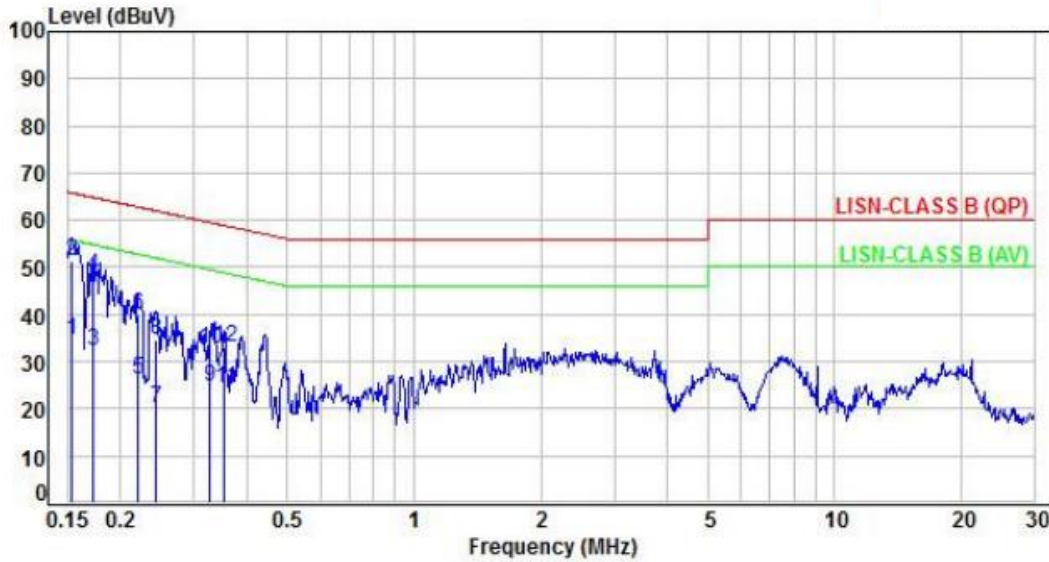
5.3. Typical Test Setup





5.4. Test Result and Data

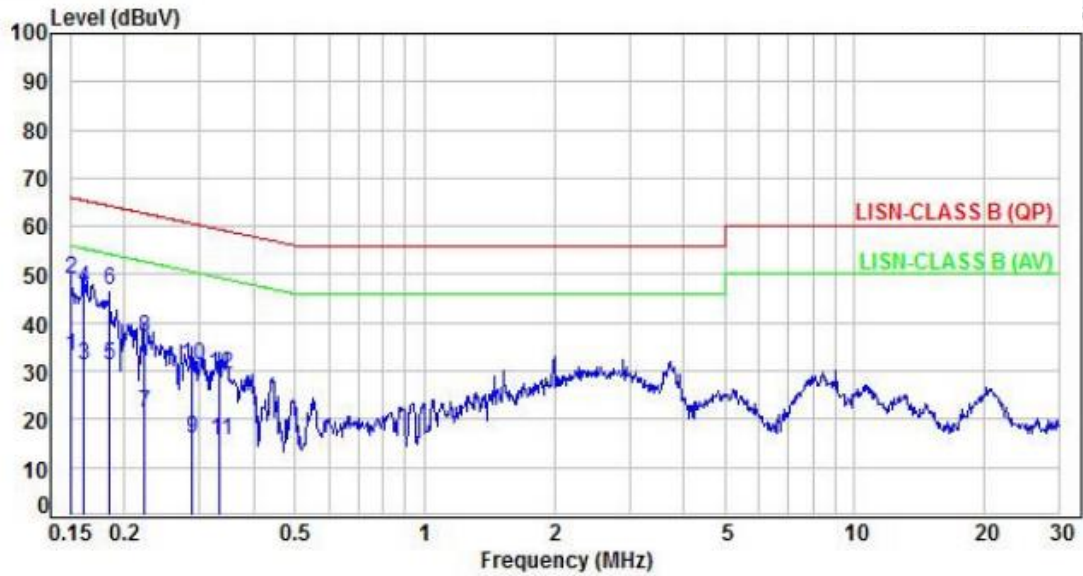
Power	: AC 120V / 60Hz	Pol/Phase	: LINE
Test Mode	: Mode 4		:



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.15	9.96	24.74	34.70	55.82	-21.12	Average	P
2	0.15	9.96	41.20	51.16	65.82	-14.66	QP	P
3	0.17	9.96	22.53	32.49	54.86	-22.37	Average	P
4	0.17	9.96	38.37	48.33	64.86	-16.53	QP	P
5	0.22	9.96	16.26	26.22	52.83	-26.61	Average	P
6	0.22	9.96	29.99	39.95	62.83	-22.88	QP	P
7	0.24	9.96	10.18	20.14	51.95	-31.81	Average	P
8	0.24	9.96	24.72	34.68	61.95	-27.27	QP	P
9	0.33	9.97	14.68	24.65	49.55	-24.90	Average	P
10	0.33	9.97	22.90	32.87	59.55	-26.68	QP	P
11	0.35	9.97	14.19	24.16	48.87	-24.71	Average	P
12	0.35	9.97	23.07	33.04	58.87	-25.83	QP	P



Power	: AC 120V / 60Hz	Pol/Phase	: NEUTRAL
Test Mode	: Mode 4		



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.15	9.97	23.14	33.11	55.99	-22.88	Average	P
2	0.15	9.97	39.15	49.12	65.99	-16.87	QP	P
3	0.16	9.97	21.38	31.35	55.38	-24.03	Average	P
4	0.16	9.97	37.01	46.98	65.38	-18.40	QP	P
5	0.18	9.97	21.12	31.09	54.28	-23.19	Average	P
6	0.18	9.97	36.86	46.83	64.28	-17.45	QP	P
7	0.22	9.97	11.36	21.33	52.74	-31.41	Average	P
8	0.22	9.97	27.09	37.06	62.74	-25.68	QP	P
9	0.29	9.97	5.95	15.92	50.63	-34.71	Average	P
10	0.29	9.97	21.17	31.14	60.63	-29.49	QP	P
11	0.33	9.98	5.71	15.69	49.35	-33.66	Average	P
12	0.33	9.98	19.30	29.28	59.35	-30.07	QP	P



6. Test of Spurious Emission (Radiated)

6.1. Test Limit

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (4) For transmitters operating in the 5.725-5.85 GHz band:
All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27dBm/MHz at the band edge.
- (5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.
- (6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.
- (7) The provisions of §15.205 apply to intentional radiators operating under this section.
- (8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.



6.2. Test Procedures

- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- f. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.
- h. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- i. "Cone of radiation" has been considered to be 3dB bandwidth of the measurement antenna.

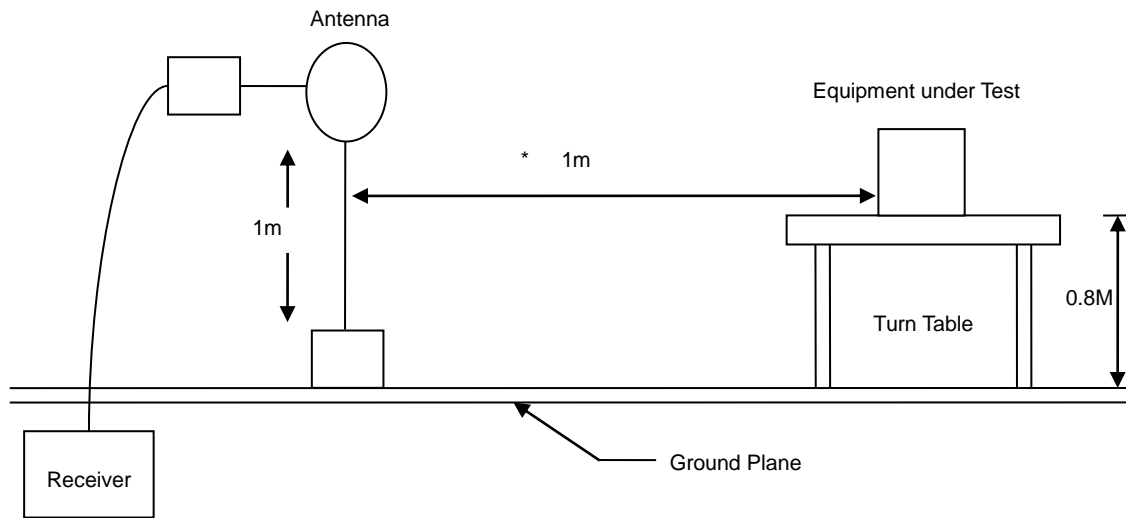
Note:

- 1.The supporting fixture shall permit orientation of the EUT in each of three orthogonal axis positions such that emissions from the EUT are maximized. (Y-AXIS is the worst.)
- 2.Due to the test software function limit the operation band setting(200dBuV/m). There's no corresponding limitation in the actual test item.

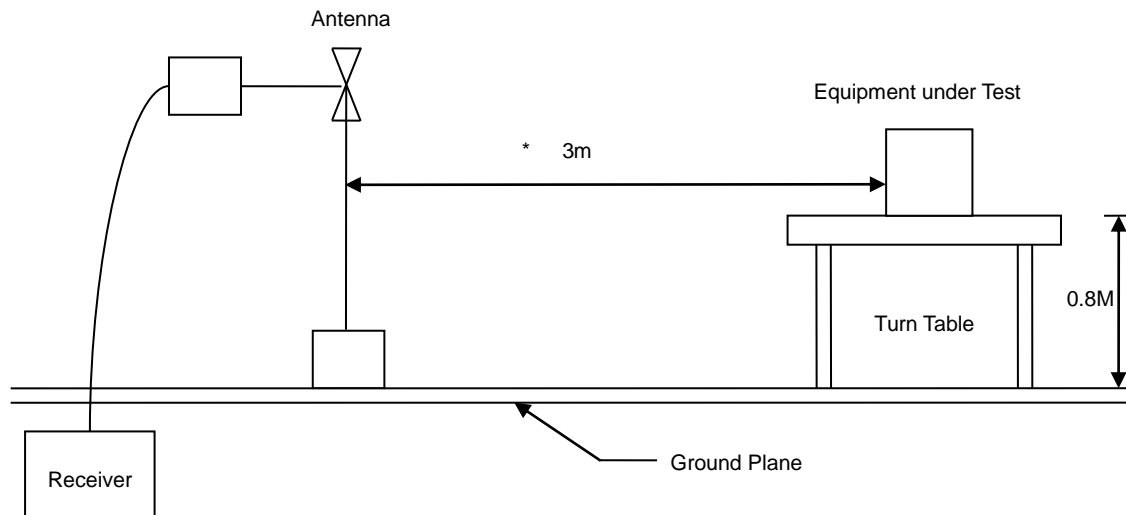


6.3. Typical Test Setup

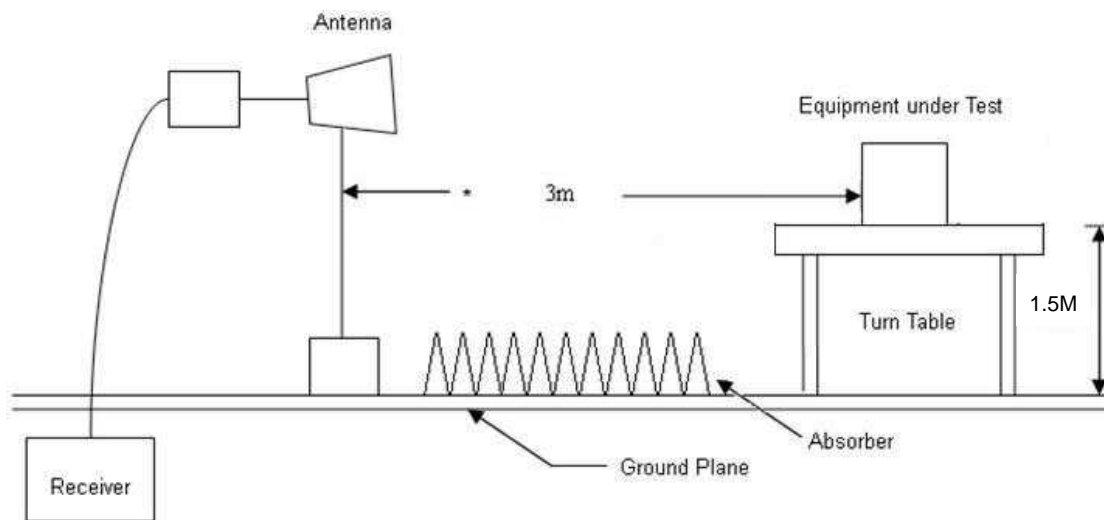
Below 30MHz test setup



30MHz- 1GHz Test Setup



Above 1GHz Test Setup



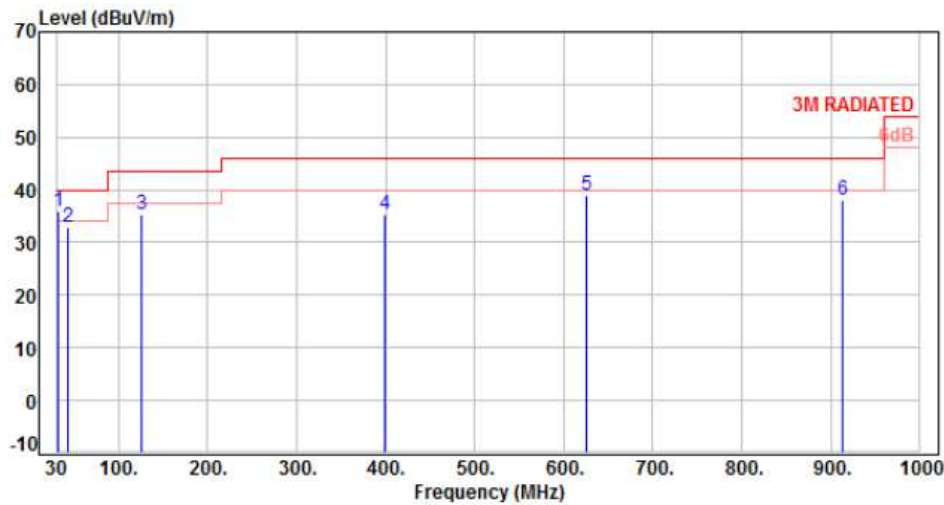


6.4. Test Result and Data (9kHz ~ 30MHz)

The 9kHz - 30MHz spurious emission is under limit 20dB more.

6.5. Test Result and Data (30MHz ~ 1GHz)

Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, CH149		:

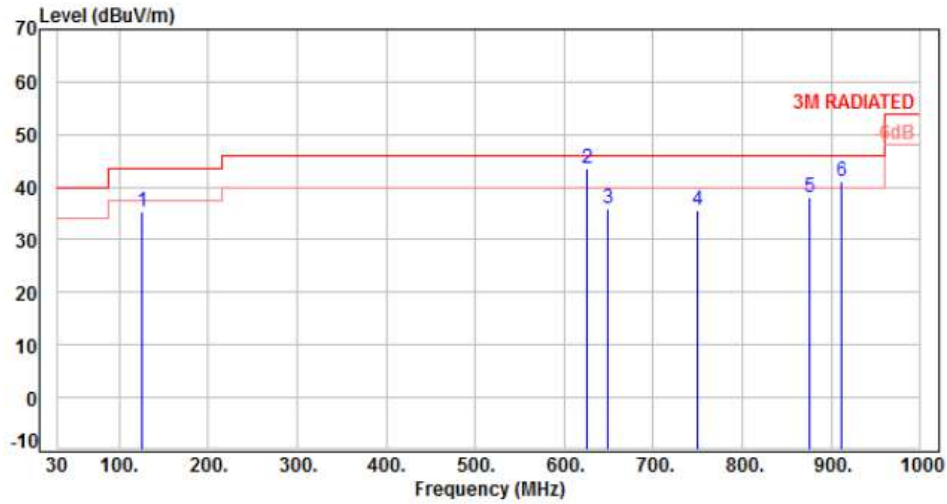


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	31.94	-11.82	47.72	35.90	40.00	-4.10	Peak	400	360	P
2	42.61	-10.71	43.45	32.74	40.00	-7.26	Peak	400	360	P
3	125.06	-12.46	47.78	35.32	43.50	-8.18	Peak	400	360	P
4	398.60	-7.08	42.55	35.47	46.00	-10.53	Peak	400	360	P
5	625.58	-2.03	40.90	38.87	46.00	-7.13	Peak	400	360	P
6	912.70	2.16	35.80	37.96	46.00	-8.04	Peak	400	360	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, CH149		:



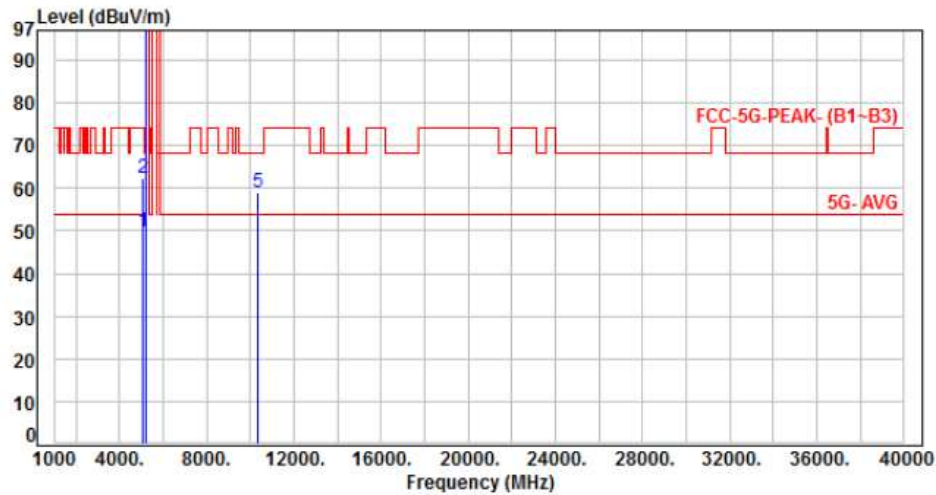
No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	125.06	-12.46	47.93	35.47	43.50	-8.03	Peak	400	360	P
2	625.58	-2.03	45.55	43.52	46.00	-2.48	QP	125	360	P
3	648.86	-1.94	37.99	36.05	46.00	-9.95	Peak	400	360	P
4	749.74	-0.24	35.91	35.67	46.00	-10.33	Peak	400	360	P
5	875.84	1.50	36.65	38.15	46.00	-7.85	Peak	400	360	P
6	910.76	2.12	38.83	40.95	46.00	-5.05	Peak	400	360	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



6.6. Test Result and Data (1GHz ~ 40GHz)

Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, Band 1, CH36		:

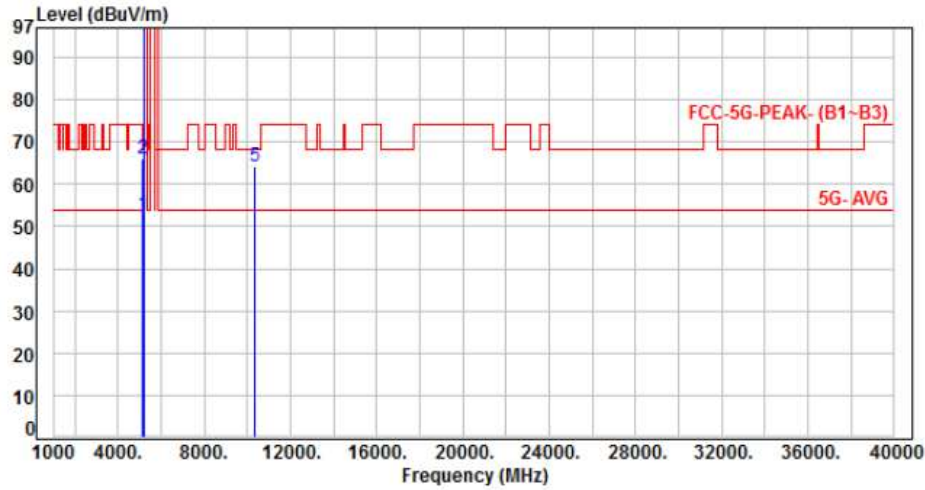


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5098.00	4.56	45.12	49.68	54.00	-4.32	Average	318	35	P
2	5098.00	4.56	57.83	62.39	74.00	-11.61	Peak	318	35	P
3	5180.00	4.66	98.36	103.02	200.00	-96.98	Average	318	35	P
4	5180.00	4.66	107.74	112.40	200.00	-87.60	Peak	318	35	P
5	10360.00	11.51	47.47	58.98	68.20	-9.22	Peak	100	24	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, Band 1, CH36		:

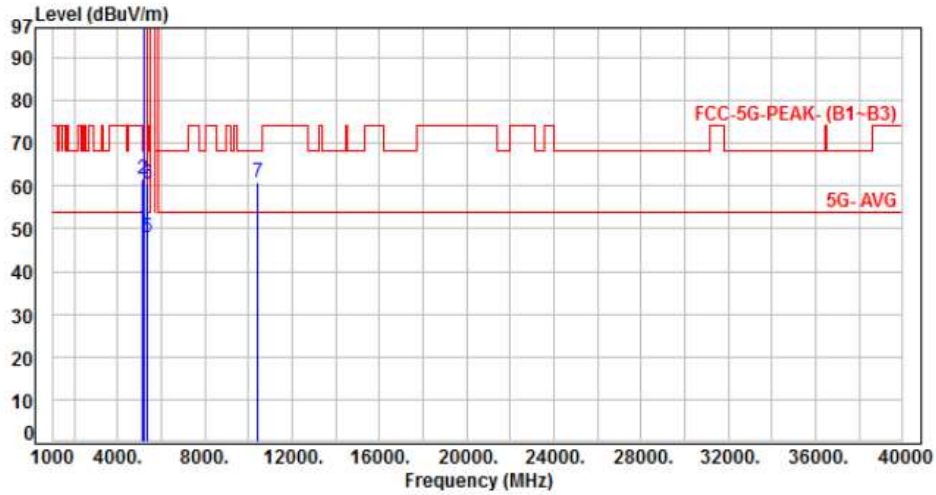


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5106.00	4.58	48.29	52.87	54.00	-1.13	Average	207	280	P
2	5106.00	4.58	61.58	66.16	74.00	-7.84	Peak	207	280	P
3	5180.00	4.66	102.34	107.00	200.00	-93.00	Average	206	280	P
4	5180.00	4.66	111.25	115.91	200.00	-84.09	Peak	206	280	P
5	10360.00	11.51	52.85	64.36	68.20	-3.84	Peak	100	102	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, Band 1, CH40		:

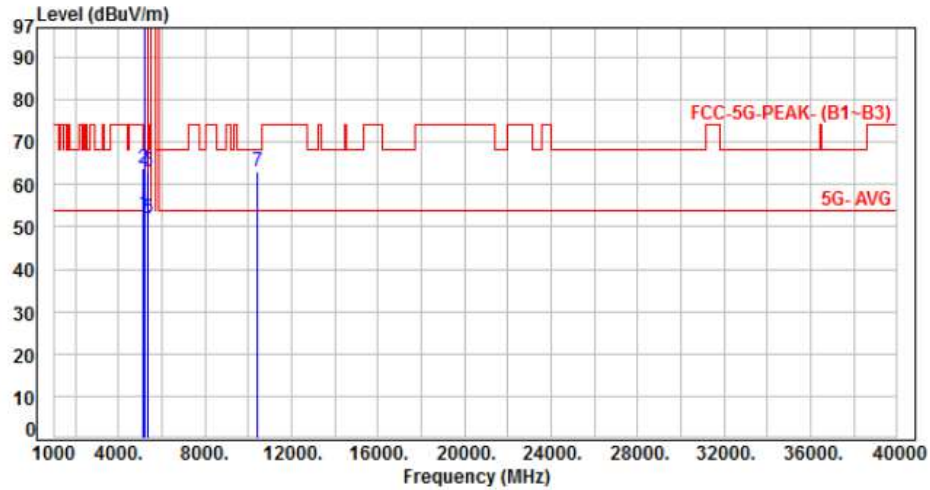


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5116.00	4.60	45.55	50.15	54.00	-3.85	Average	334	33	P
2	5116.00	4.60	56.84	61.44	74.00	-12.56	Peak	334	33	P
3	5200.00	4.63	98.09	102.72	200.00	-97.28	Average	334	33	P
4	5200.00	4.63	107.48	112.11	200.00	-87.89	Peak	334	33	P
5	5357.00	5.03	42.99	48.02	54.00	-5.98	Average	334	33	P
6	5357.00	5.03	55.64	60.67	74.00	-13.33	Peak	334	33	P
7	10400.00	11.57	49.41	60.98	68.20	-7.22	Peak	100	176	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, Band 1, CH40		:

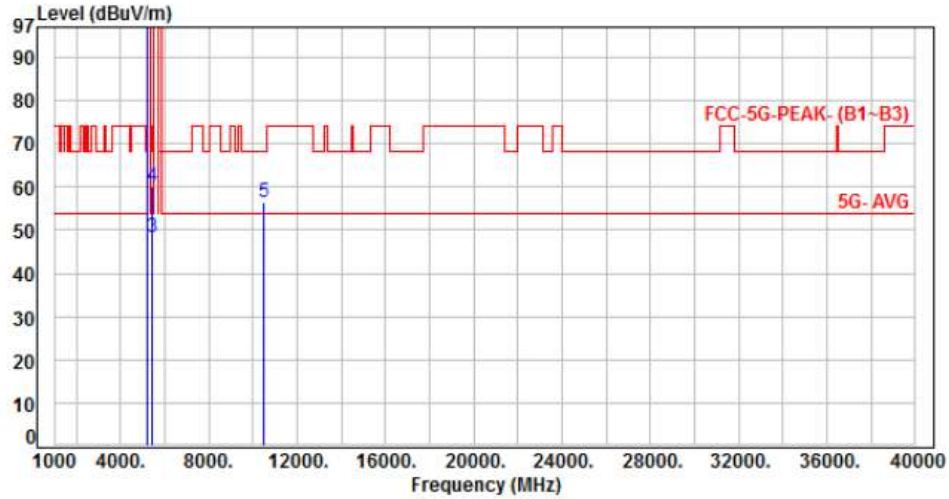


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5116.00	4.60	48.35	52.95	54.00	-1.05	Average	208	278	P
2	5116.00	4.60	59.23	63.83	74.00	-10.17	Peak	208	278	P
3	5200.00	4.63	103.23	107.86	200.00	-92.14	Average	208	278	P
4	5200.00	4.63	113.03	117.66	200.00	-82.34	Peak	208	278	P
5	5356.00	5.03	46.94	51.97	54.00	-2.03	Average	208	278	P
6	5356.00	5.03	57.89	62.92	74.00	-11.08	Peak	208	278	P
7	10400.00	11.57	51.46	63.03	68.20	-5.17	Peak	166	298	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, Band 1, CH48		:

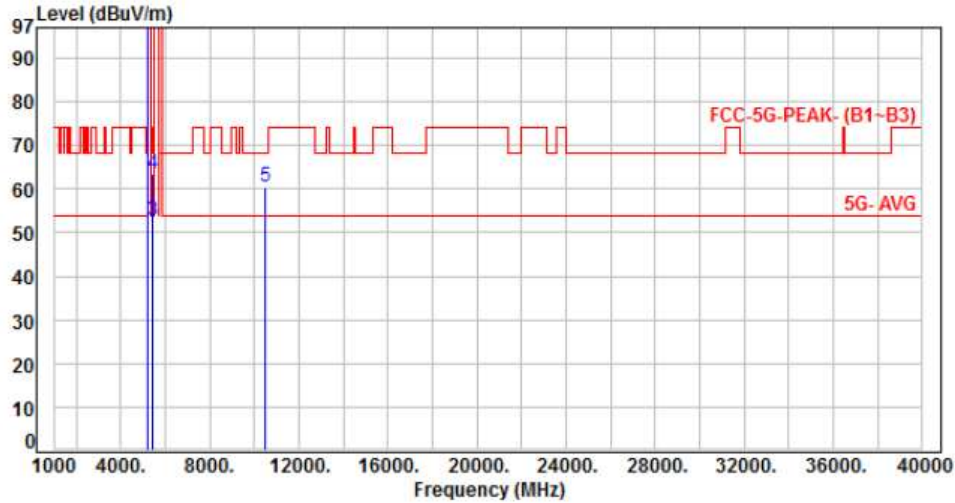


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5240.00	4.73	99.45	104.18	200.00	-95.82	Average	203	31	P
2	5240.00	4.73	109.42	114.15	200.00	-85.85	Peak	203	31	P
3	5400.00	5.06	43.42	48.48	54.00	-5.52	Average	203	31	P
4	5400.00	5.06	54.94	60.00	74.00	-14.00	Peak	203	31	P
5	10480.00	11.70	44.68	56.38	68.20	-11.82	Peak	121	111	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, Band 1, CH48		:

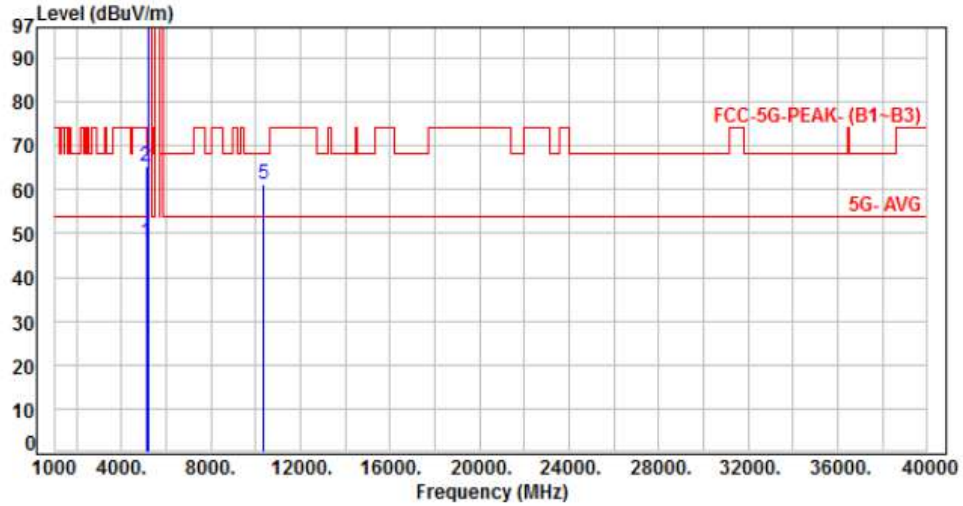


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5240.00	4.73	103.10	107.83	200.00	-92.17	Average	213	278	P
2	5240.00	4.73	113.15	117.88	200.00	-82.12	Peak	213	278	P
3	5401.00	5.06	47.60	52.66	54.00	-1.34	Average	213	278	P
4	5401.00	5.06	58.38	63.44	74.00	-10.56	Peak	213	278	P
5	10480.00	11.70	48.92	60.62	68.20	-7.58	Peak	159	301	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, Band 1, CH36		:

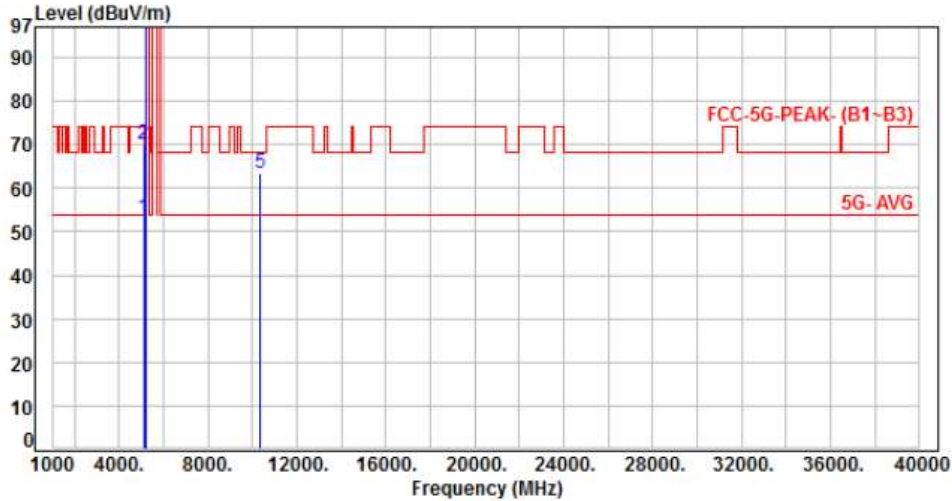


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5102.00	4.57	43.52	48.09	54.00	-5.91	Average	140	34	P
2	5102.00	4.57	60.74	65.31	74.00	-8.69	Peak	140	34	P
3	5180.00	4.66	99.07	103.73	200.00	-96.27	Average	140	34	P
4	5180.00	4.66	110.68	115.34	200.00	-84.66	Peak	140	34	P
5	10360.00	11.51	49.78	61.29	68.20	-6.91	Peak	100	173	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, Band 1, CH36		:

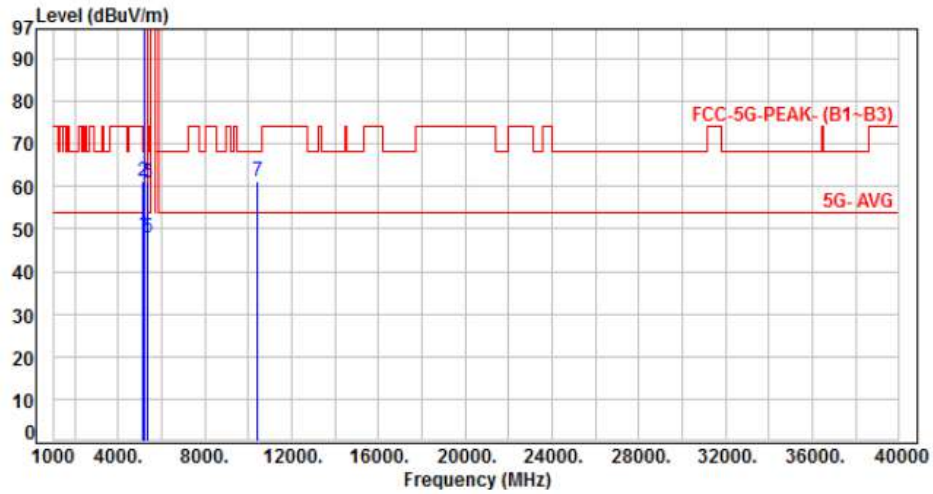


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5101.00	4.56	48.40	52.96	54.00	-1.04	Average	209	281	P
2	5101.00	4.56	65.47	70.03	74.00	-3.97	Peak	209	281	P
3	5180.00	4.66	102.91	107.57	200.00	-92.43	Average	209	281	P
4	5180.00	4.66	113.13	117.79	200.00	-82.21	Peak	209	281	P
5	10360.00	11.51	52.07	63.58	68.20	-4.62	Peak	101	293	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, Band 1, CH40		

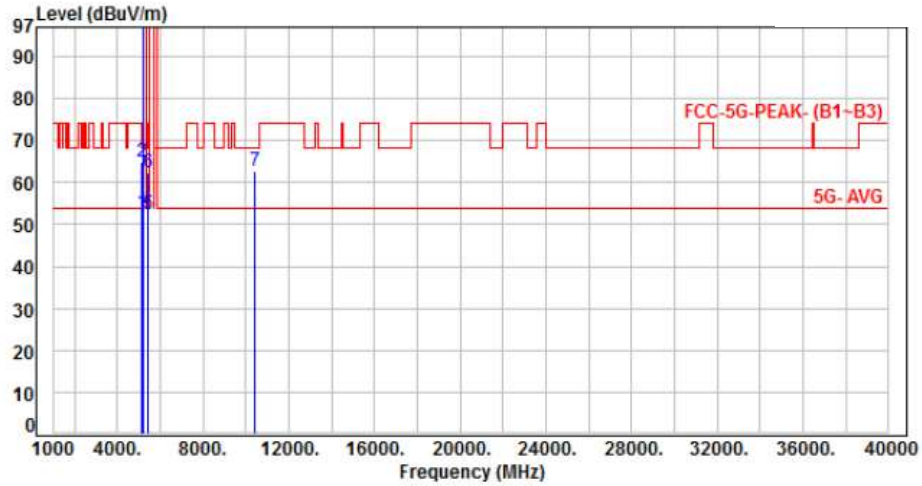


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5121.00	4.62	44.19	48.81	54.00	-5.19	Average	321	22	P
2	5121.00	4.62	56.62	61.24	74.00	-12.76	Peak	321	22	P
3	5200.00	4.63	98.27	102.90	200.00	-97.10	Average	321	22	P
4	5200.00	4.63	107.56	112.19	200.00	-87.81	Peak	321	22	P
5	5351.00	5.03	42.89	47.92	54.00	-6.08	Average	321	22	P
6	5351.00	5.03	55.78	60.81	74.00	-13.19	Peak	321	22	P
7	10400.00	11.57	49.82	61.39	68.20	-6.81	Peak	100	173	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, Band 1, CH40		:

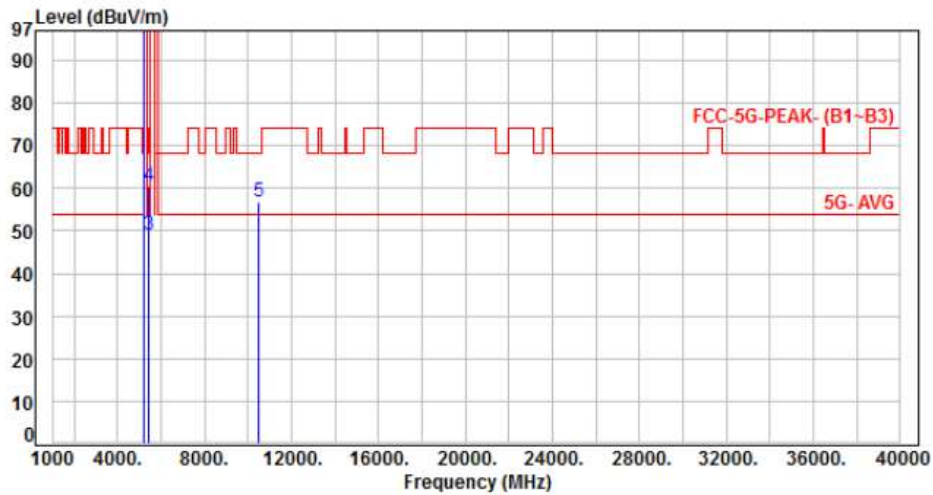


No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5121.00	4.62	48.13	52.75	54.00	-1.25	Average	206	276	P
2	5121.00	4.62	60.30	64.92	74.00	-9.08	Peak	206	276	P
3	5200.00	4.63	103.29	107.92	200.00	-92.08	Average	206	276	P
4	5200.00	4.63	113.45	118.08	200.00	-81.92	Peak	206	276	P
5	5416.00	5.09	47.10	52.19	54.00	-1.81	Average	206	276	P
6	5416.00	5.09	57.26	62.35	74.00	-11.65	Peak	206	276	P
7	10400.00	11.57	51.02	62.59	68.20	-5.61	Peak	168	299	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, Band 1, CH48		:

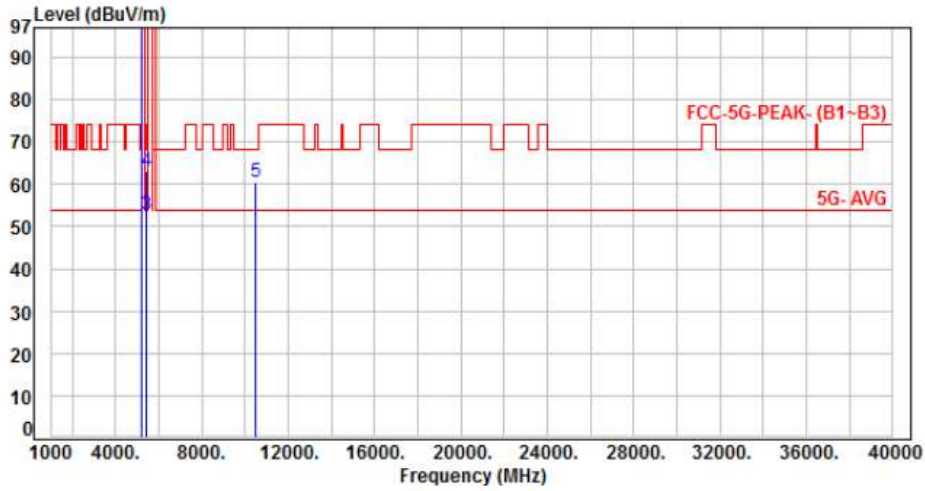


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5240.00	4.73	100.21	104.94	200.00	-95.06	Average	259	29	P
2	5240.00	4.73	111.42	116.15	200.00	-83.85	Peak	259	29	P
3	5400.00	5.06	43.86	48.92	54.00	-5.08	Average	259	29	P
4	5400.00	5.06	55.41	60.47	74.00	-13.53	Peak	259	29	P
5	10480.00	11.70	45.13	56.83	68.20	-11.37	Peak	100	101	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, Band 1, CH48		:

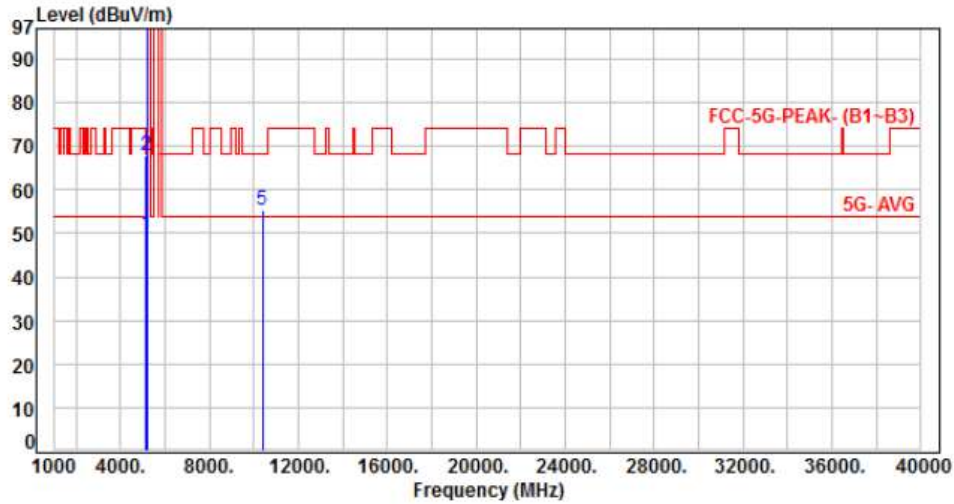


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5240.00	4.73	103.73	108.46	200.00	-91.54	Average	227	279	P
2	5240.00	4.73	114.21	118.94	200.00	-81.06	Peak	227	279	P
3	5458.00	5.20	47.55	52.75	54.00	-1.25	Average	227	279	P
4	5458.00	5.20	57.84	63.04	74.00	-10.96	Peak	227	279	P
5	10480.00	11.70	48.96	60.66	68.20	-7.54	Peak	145	300	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 5, Band 1, CH38		:

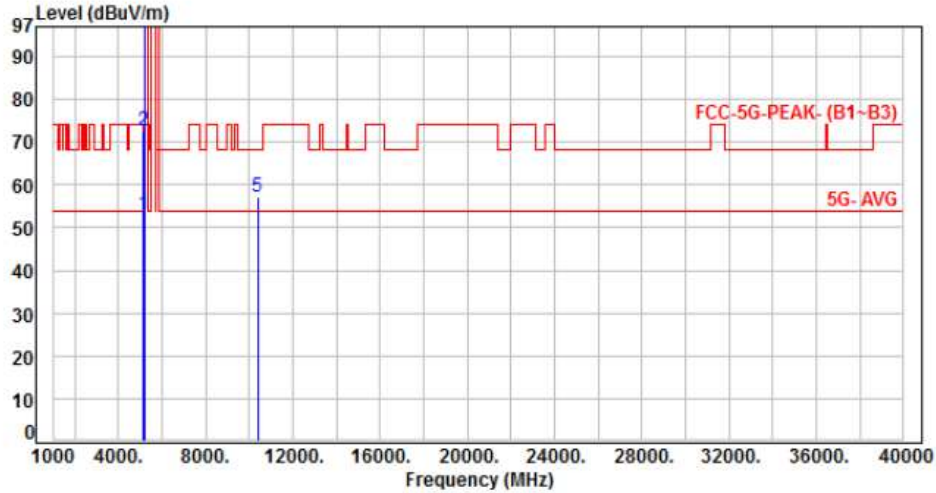


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.69	44.95	49.64	54.00	-4.36	Average	247	35	P
2	5150.00	4.69	63.07	67.76	74.00	-6.24	Peak	247	35	P
3	5190.00	4.64	94.69	99.33	200.00	-100.67	Average	247	35	P
4	5190.00	4.64	105.82	110.46	200.00	-89.54	Peak	247	35	P
5	10380.00	11.54	43.95	55.49	68.20	-12.71	Peak	100	175	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 5, Band 1, CH38		:

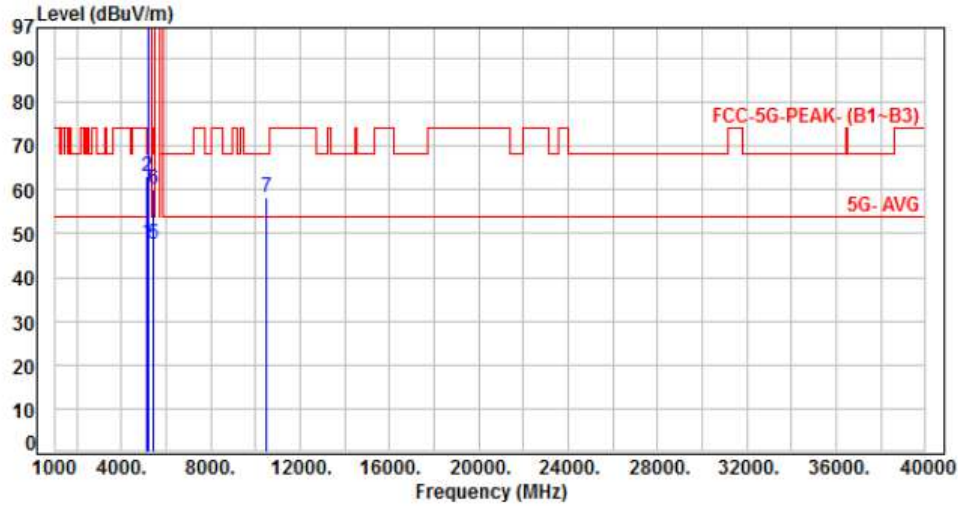


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.69	48.28	52.97	54.00	-1.03	Average	209	279	P
2	5150.00	4.69	67.93	72.62	74.00	-1.38	Peak	209	279	P
3	5190.00	4.64	97.16	101.80	200.00	-98.20	Average	209	279	P
4	5190.00	4.64	108.78	113.42	200.00	-86.58	Peak	209	279	P
5	10380.00	11.54	45.63	57.17	68.20	-11.03	Peak	153	302	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 5, Band 1, CH46		:

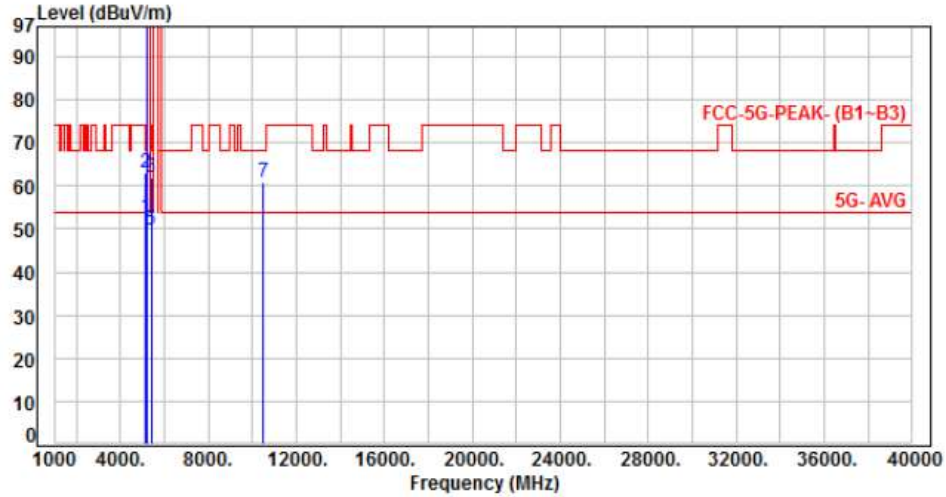


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.69	43.27	47.96	54.00	-6.04	Average	181	32	P
2	5150.00	4.69	58.29	62.98	74.00	-11.02	Peak	181	32	P
3	5230.00	4.70	96.18	100.88	200.00	-99.12	Average	181	32	P
4	5230.00	4.70	108.04	112.74	200.00	-87.26	Peak	181	32	P
5	5407.00	5.07	42.58	47.65	54.00	-6.35	Average	181	32	P
6	5407.00	5.07	54.99	60.06	74.00	-13.94	Peak	181	32	P
7	10460.00	11.67	46.79	58.46	68.20	-9.74	Peak	100	179	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 5, Band 1, CH46		:

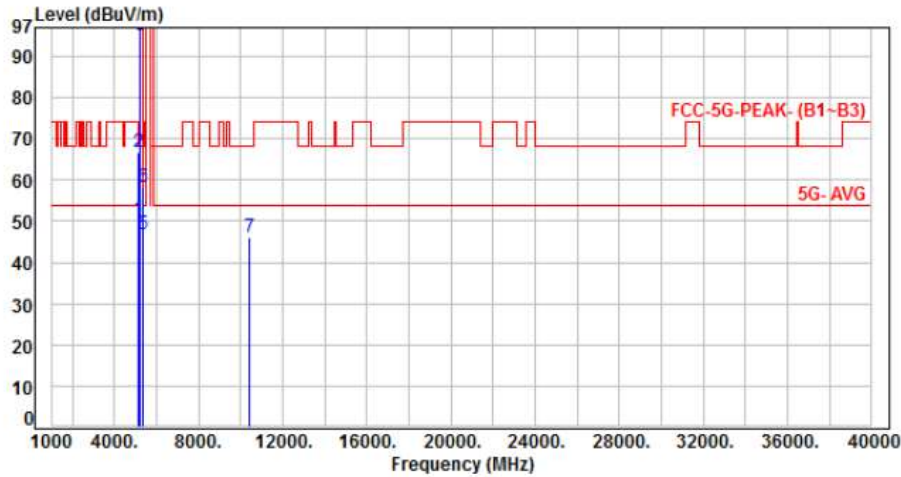


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.69	48.07	52.76	54.00	-1.24	Average	204	271	P
2	5150.00	4.69	58.34	63.03	74.00	-10.97	Peak	204	271	P
3	5230.00	4.70	100.14	104.84	200.00	-95.16	Average	204	271	P
4	5230.00	4.70	112.16	116.86	200.00	-83.14	Peak	204	271	P
5	5392.00	5.05	44.79	49.84	54.00	-4.16	Average	204	271	P
6	5392.00	5.05	56.86	61.91	74.00	-12.09	Peak	204	271	P
7	10460.00	11.67	49.18	60.85	68.20	-7.35	Peak	120	276	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 6, Band 1, CH42		:

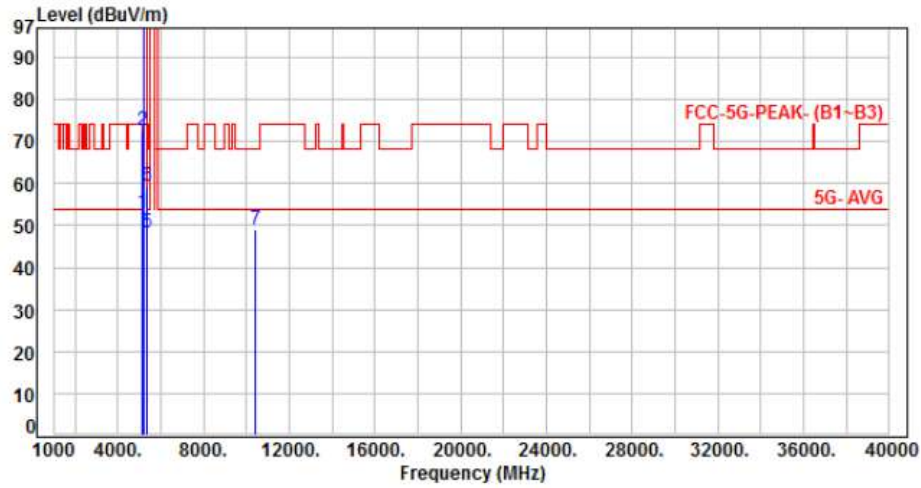


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.69	45.98	50.67	54.00	-3.33	Average	359	23	P
2	5150.00	4.69	61.93	66.62	74.00	-7.38	Peak	359	23	P
3	5210.00	4.65	90.54	95.19	200.00	-104.81	Average	359	23	P
4	5210.00	4.65	100.46	105.11	200.00	-94.89	Peak	359	23	P
5	5367.00	5.04	41.95	46.99	54.00	-7.01	Average	359	23	P
6	5367.00	5.04	53.38	58.42	74.00	-15.58	Peak	359	23	P
7	10420.00	11.61	34.67	46.28	68.20	-21.92	Peak	100	172	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 6, Band 1, CH42		:

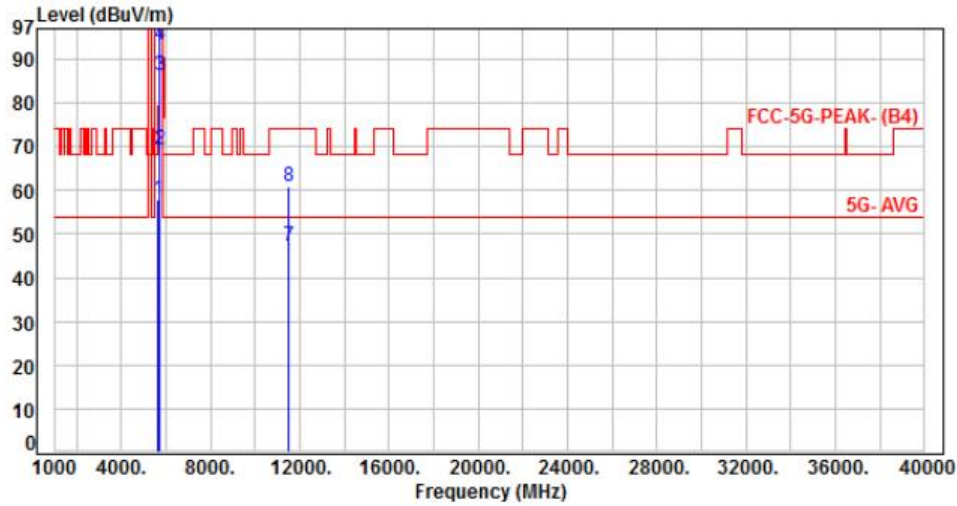


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	4.69	48.25	52.94	54.00	-1.06	Average	215	274	P
2	5150.00	4.69	67.82	72.51	74.00	-1.49	Peak	215	274	P
3	5210.00	4.65	91.73	96.38	200.00	-103.62	Average	215	274	P
4	5210.00	4.65	104.52	109.17	200.00	-90.83	Peak	215	274	P
5	5381.00	5.05	43.13	48.18	54.00	-5.82	Average	215	274	P
6	5381.00	5.05	54.36	59.41	74.00	-14.59	Peak	215	274	P
7	10420.00	11.61	37.48	49.09	68.20	-19.11	Peak	127	283	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, Band 4, CH149		:

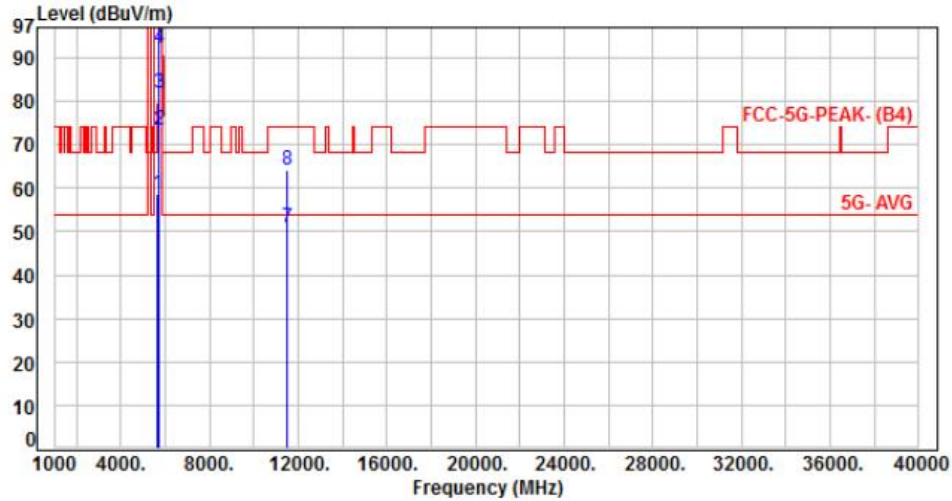


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.09	52.82	57.91	68.20	-10.29	Peak	165	38	P
2	5700.00	5.12	64.27	69.39	105.20	-35.81	Peak	165	38	P
3	5720.00	5.13	81.23	86.36	110.80	-24.44	Peak	165	38	P
4	5725.00	5.14	88.07	93.21	122.20	-28.99	Peak	165	38	P
5	5745.00	5.15	101.76	106.91	200.00	-93.09	Average	165	38	P
6	5745.00	5.15	113.16	118.31	200.00	-81.69	Peak	165	38	P
7	11490.00	13.27	33.86	47.13	54.00	-6.87	Average	109	175	P
8	11490.00	13.27	47.64	60.91	74.00	-13.09	Peak	109	175	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, Band 4, CH149		:

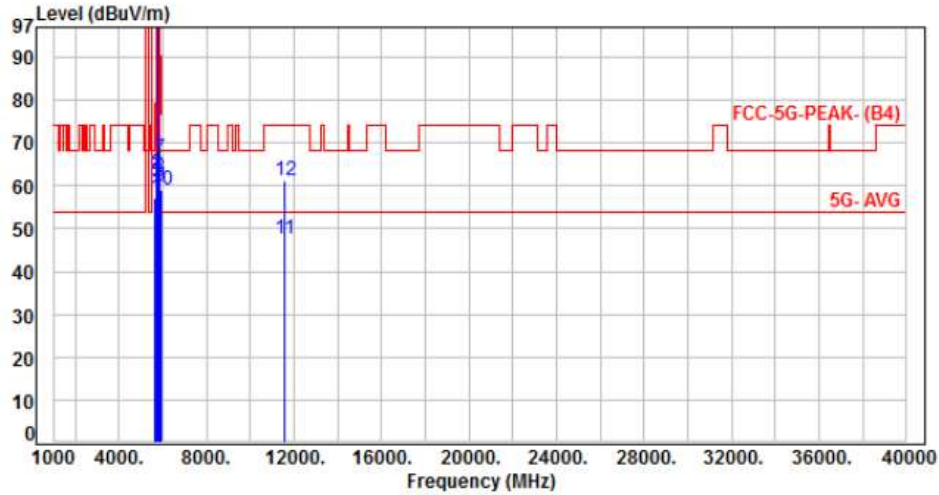


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.09	53.42	58.51	68.20	-9.69	Peak	161	271	P
2	5700.00	5.12	68.32	73.44	105.20	-31.76	Peak	161	271	P
3	5720.00	5.13	76.83	81.96	110.80	-28.84	Peak	161	271	P
4	5725.00	5.14	87.13	92.27	122.20	-29.93	Peak	161	271	P
5	5745.00	5.15	107.46	112.61	200.00	-87.39	Average	161	271	P
6	5745.00	5.15	117.19	122.34	200.00	-77.66	Peak	161	271	P
7	11490.00	13.27	37.47	50.74	54.00	-3.26	Average	129	102	P
8	11490.00	13.27	50.75	64.02	74.00	-9.98	Peak	129	102	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, Band 4, CH157		:

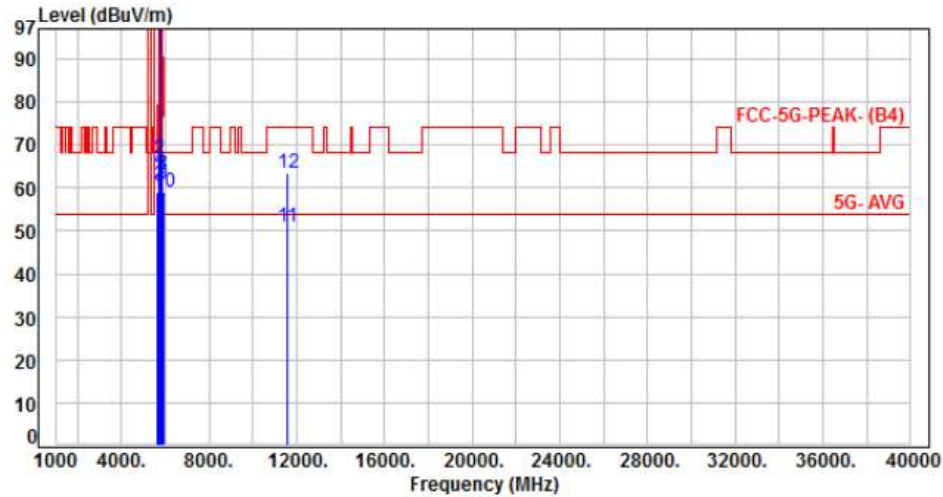


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.09	52.26	57.35	68.20	-10.85	Peak	152	48	P
2	5700.00	5.12	57.52	62.64	105.20	-42.56	Peak	152	48	P
3	5720.00	5.13	55.75	60.88	110.80	-49.92	Peak	152	48	P
4	5725.00	5.14	59.22	64.36	122.20	-57.84	Peak	152	48	P
5	5785.00	5.17	103.57	108.74	200.00	-91.26	Average	152	48	P
6	5785.00	5.17	113.38	118.55	200.00	-81.45	Peak	152	48	P
7	5850.00	5.21	61.19	66.40	122.20	-55.80	Peak	152	48	P
8	5855.00	5.23	56.78	62.01	110.80	-48.79	Peak	152	48	P
9	5875.00	5.31	54.54	59.85	105.20	-45.35	Peak	152	48	P
10	5925.00	5.49	53.34	58.83	68.20	-9.37	Peak	152	48	P
11	11570.00	13.50	33.93	47.43	54.00	-6.57	Average	100	178	P
12	11570.00	13.50	47.75	61.25	74.00	-12.75	Peak	100	178	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, Band 4, CH157		:

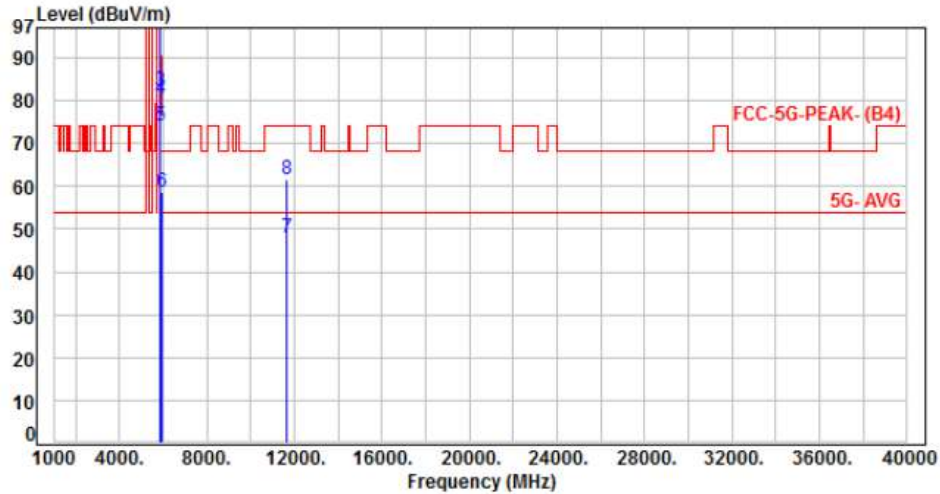


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.09	54.10	59.19	68.20	-9.01	Peak	216	259	P
2	5700.00	5.12	61.62	66.74	105.20	-38.46	Peak	216	259	P
3	5720.00	5.13	55.29	60.42	110.80	-50.38	Peak	216	259	P
4	5725.00	5.14	58.99	64.13	122.20	-58.07	Peak	216	259	P
5	5785.00	5.17	107.76	112.93	200.00	-87.07	Average	216	259	P
6	5785.00	5.17	117.65	122.82	200.00	-77.18	Peak	216	259	P
7	5850.00	5.21	57.47	62.68	122.20	-59.52	Peak	216	259	P
8	5855.00	5.23	57.71	62.94	110.80	-47.86	Peak	216	259	P
9	5875.00	5.31	55.62	60.93	105.20	-44.27	Peak	216	259	P
10	5925.00	5.49	53.52	59.01	68.20	-9.19	Peak	216	259	P
11	11570.00	13.50	37.41	50.91	54.00	-3.09	Average	208	105	P
12	11570.00	13.50	49.96	63.46	74.00	-10.54	Peak	208	105	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 1, Band 4, CH165		:

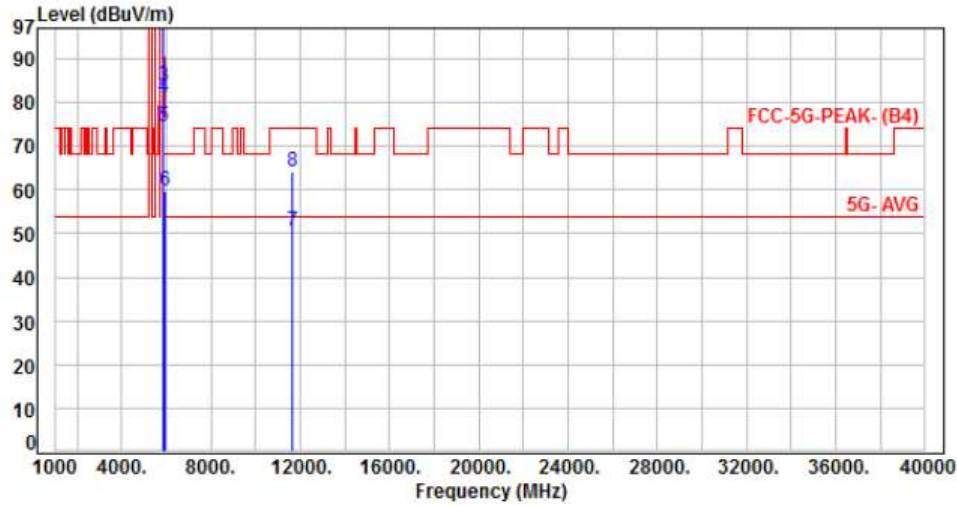


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5825.00	5.19	104.73	109.92	200.00	-90.08	Average	129	37	P
2	5825.00	5.19	114.17	119.36	200.00	-80.64	Peak	129	37	P
3	5850.00	5.21	76.88	82.09	122.20	-40.11	Peak	129	37	P
4	5855.00	5.23	75.18	80.41	110.80	-30.39	Peak	129	37	P
5	5875.00	5.31	68.65	73.96	105.20	-31.24	Peak	129	37	P
6	5925.00	5.49	53.32	58.81	68.20	-9.39	Peak	129	37	P
7	11650.00	13.68	34.08	47.76	54.00	-6.24	Average	101	169	P
8	11650.00	13.68	48.01	61.69	74.00	-12.31	Peak	101	169	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 1, Band 4, CH165		:

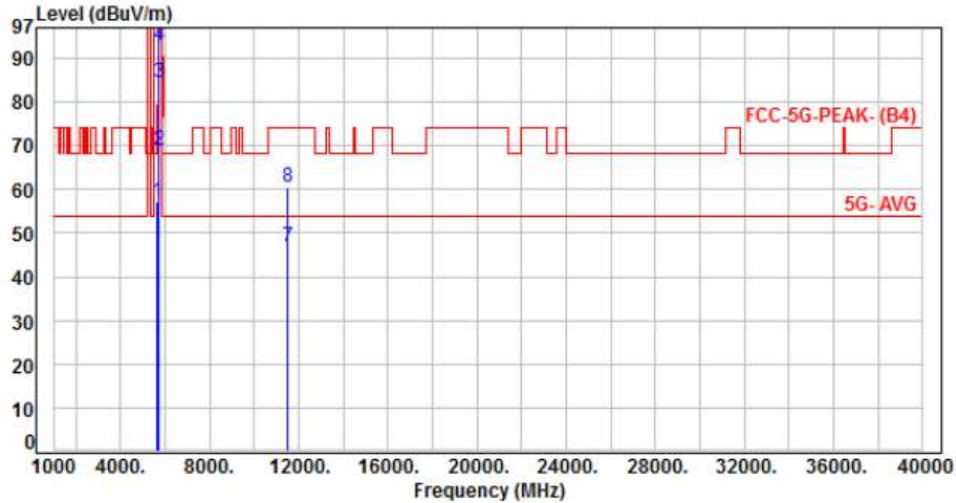


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5825.00	5.19	107.03	112.22	200.00	-87.78	Average	216	259	P
2	5825.00	5.19	117.45	122.64	200.00	-77.36	Peak	216	259	P
3	5850.00	5.21	78.52	83.73	122.20	-38.47	Peak	216	259	P
4	5855.00	5.23	75.94	81.17	110.80	-29.63	Peak	216	259	P
5	5875.00	5.31	69.37	74.68	105.20	-30.52	Peak	216	259	P
6	5925.00	5.49	54.37	59.86	68.20	-8.34	Peak	216	259	P
7	11650.00	13.68	36.88	50.56	54.00	-3.44	Average	207	104	P
8	11650.00	13.68	50.36	64.04	74.00	-9.96	Peak	207	104	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, Band 4, CH149		:

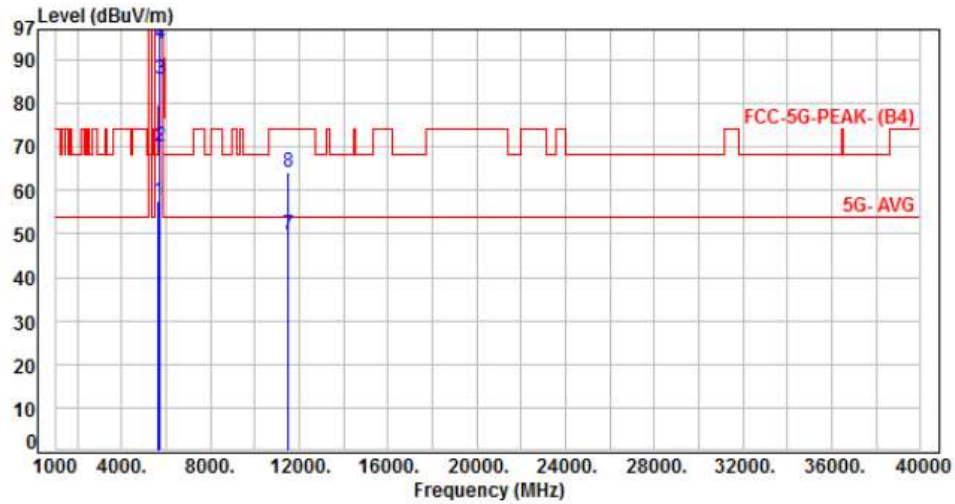


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.09	52.13	57.22	68.20	-10.98	Peak	205	32	P
2	5700.00	5.12	63.76	68.88	105.20	-36.32	Peak	205	32	P
3	5720.00	5.13	79.31	84.44	110.80	-26.36	Peak	205	32	P
4	5725.00	5.14	87.84	92.98	122.20	-29.22	Peak	205	32	P
5	5745.00	5.15	102.12	107.27	200.00	-92.73	Average	205	32	P
6	5745.00	5.15	113.64	118.79	200.00	-81.21	Peak	205	32	P
7	11490.00	13.27	33.41	46.68	54.00	-7.32	Average	100	173	P
8	11490.00	13.27	47.25	60.52	74.00	-13.48	Peak	100	173	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, Band 4, CH149		:

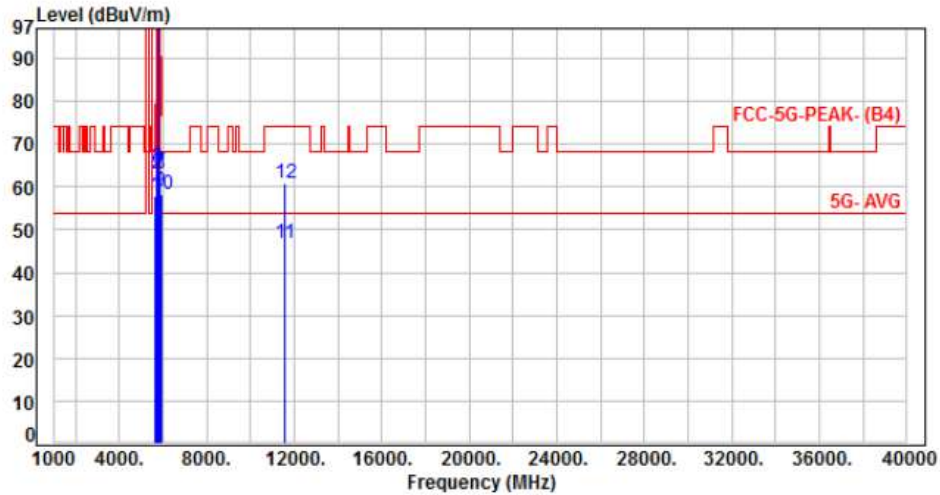


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.09	52.28	57.37	68.20	-10.83	Peak	199	259	P
2	5700.00	5.12	64.79	69.91	105.20	-35.29	Peak	199	259	P
3	5720.00	5.13	80.29	85.42	110.80	-25.38	Peak	199	259	P
4	5725.00	5.14	88.72	93.86	122.20	-28.34	Peak	199	259	P
5	5745.00	5.15	105.46	110.61	200.00	-89.39	Average	199	259	P
6	5745.00	5.15	115.83	120.98	200.00	-79.02	Peak	199	259	P
7	11490.00	13.27	36.58	49.85	54.00	-4.15	Average	129	103	P
8	11490.00	13.27	50.87	64.14	74.00	-9.86	Peak	129	103	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, Band 4, CH157		:

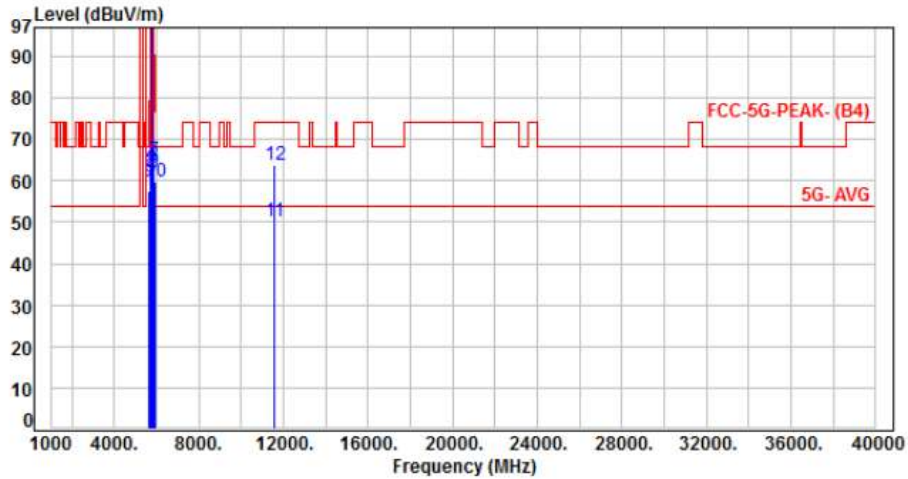


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.09	52.69	57.78	68.20	-10.42	Peak	218	34	P
2	5700.00	5.12	57.96	63.08	105.20	-42.12	Peak	218	34	P
3	5720.00	5.13	59.49	64.62	110.80	-46.18	Peak	218	34	P
4	5725.00	5.14	59.26	64.40	122.20	-57.80	Peak	218	34	P
5	5785.00	5.17	102.23	107.40	200.00	-92.60	Average	218	34	P
6	5785.00	5.17	113.85	119.02	200.00	-80.98	Peak	218	34	P
7	5850.00	5.21	58.14	63.35	122.20	-58.85	Peak	218	34	P
8	5855.00	5.23	57.90	63.13	110.80	-47.67	Peak	218	34	P
9	5875.00	5.31	53.64	58.95	105.20	-46.25	Peak	218	34	P
10	5925.00	5.49	52.69	58.18	68.20	-10.02	Peak	218	34	P
11	11570.00	13.50	33.35	46.85	54.00	-7.15	Average	100	172	P
12	11570.00	13.50	47.29	60.79	74.00	-13.21	Peak	100	172	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, Band 4, CH157		:

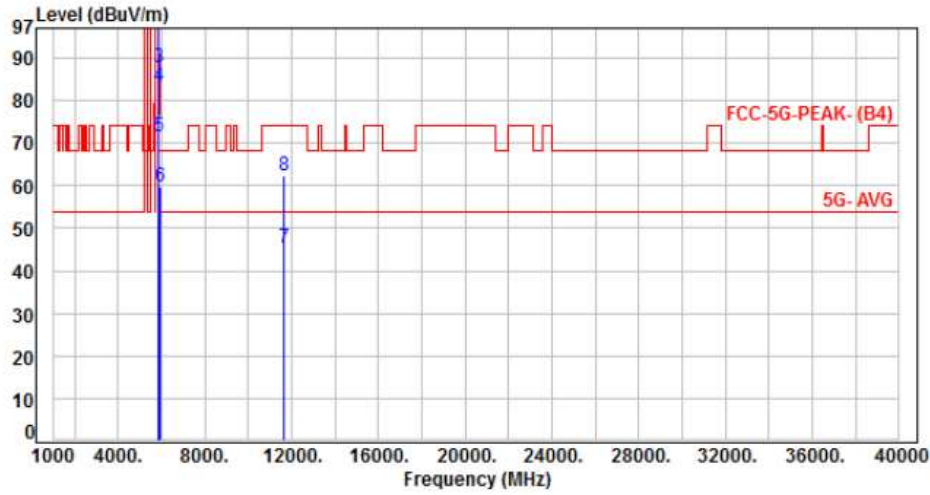


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.09	52.62	57.71	68.20	-10.49	Peak	218	261	P
2	5700.00	5.12	57.21	62.33	105.20	-42.87	Peak	218	261	P
3	5720.00	5.13	55.88	61.01	110.80	-49.79	Peak	218	261	P
4	5725.00	5.14	58.55	63.69	122.20	-58.51	Peak	218	261	P
5	5785.00	5.17	105.83	111.00	200.00	-89.00	Average	218	261	P
6	5785.00	5.17	116.89	122.06	200.00	-77.94	Peak	218	261	P
7	5850.00	5.21	59.80	65.01	122.20	-57.19	Peak	218	261	P
8	5855.00	5.23	58.66	63.89	110.80	-46.91	Peak	218	261	P
9	5875.00	5.31	56.70	62.01	105.20	-43.19	Peak	218	261	P
10	5925.00	5.49	54.18	59.67	68.20	-8.53	Peak	218	261	P
11	11570.00	13.50	36.75	50.25	54.00	-3.75	Average	114	104	P
12	11570.00	13.50	50.44	63.94	74.00	-10.06	Peak	114	104	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 4, Band 4, CH165		:

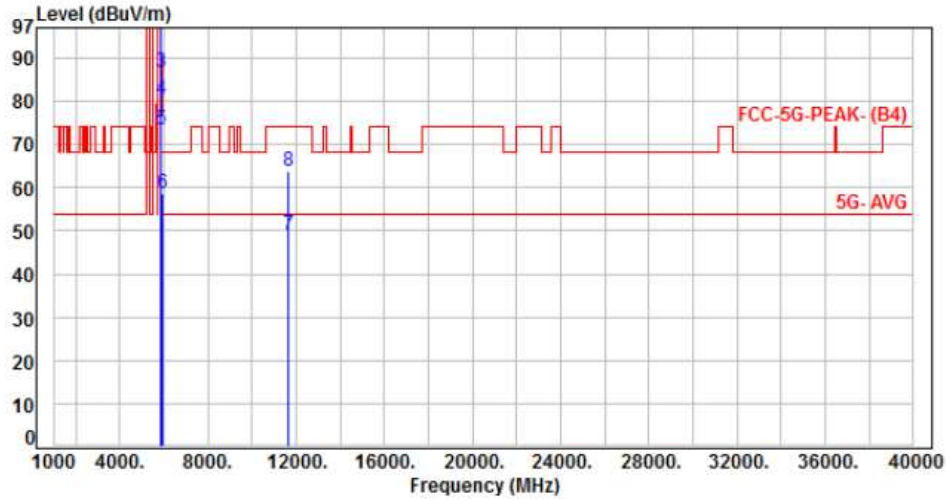


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5825.00	5.19	102.27	107.46	200.00	-92.54	Average	193	31	P
2	5825.00	5.19	113.82	119.01	200.00	-80.99	Peak	193	31	P
3	5850.00	5.21	82.73	87.94	122.20	-34.26	Peak	193	31	P
4	5855.00	5.23	78.26	83.49	110.80	-27.31	Peak	193	31	P
5	5875.00	5.31	66.19	71.50	105.20	-33.70	Peak	193	31	P
6	5925.00	5.49	54.13	59.62	68.20	-8.58	Peak	193	31	P
7	11650.00	13.68	31.85	45.53	54.00	-8.47	Average	100	174	P
8	11650.00	13.68	48.77	62.45	74.00	-11.55	Peak	100	174	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 4, Band 4, CH165		:

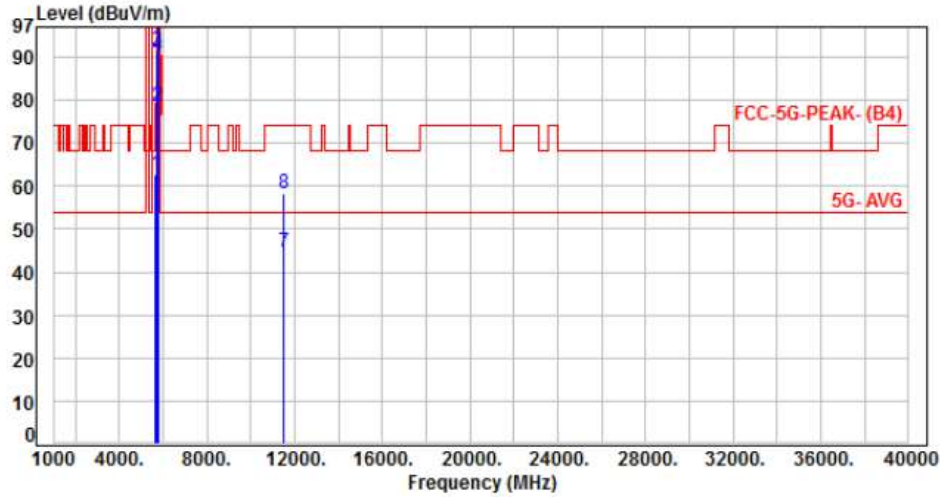


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5825.00	5.19	105.81	111.00	200.00	-89.00	Average	211	263	P
2	5825.00	5.19	116.32	121.51	200.00	-78.49	Peak	211	263	P
3	5850.00	5.21	81.54	86.75	122.20	-35.45	Peak	211	263	P
4	5855.00	5.23	75.26	80.49	110.80	-30.31	Peak	211	263	P
5	5875.00	5.31	68.18	73.49	105.20	-31.71	Peak	211	263	P
6	5925.00	5.49	53.26	58.75	68.20	-9.45	Peak	211	263	P
7	11650.00	13.68	35.48	49.16	54.00	-4.84	Average	208	105	P
8	11650.00	13.68	50.01	63.69	74.00	-10.31	Peak	208	105	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: VERTICAL
Test Mode	: Mode 5, Band 4, CH151		:

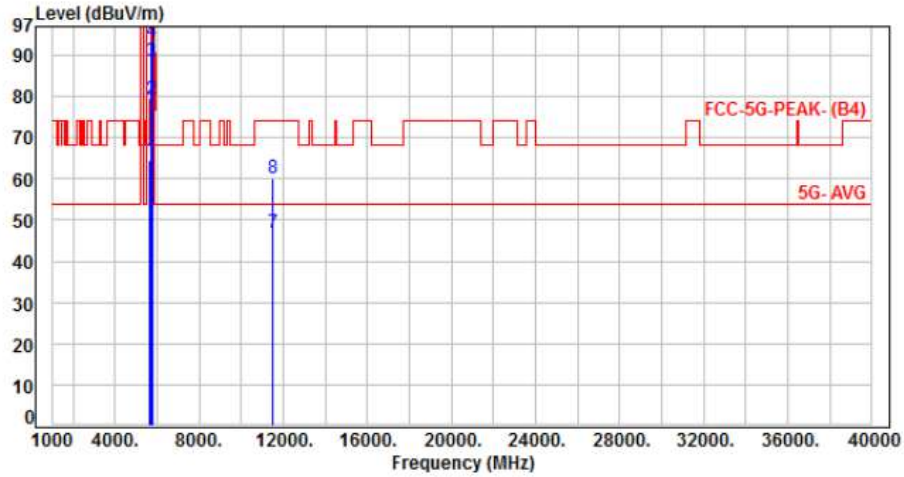


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.09	57.73	62.82	68.20	-5.38	Peak	228	15	P
2	5700.00	5.12	73.61	78.73	105.20	-26.47	Peak	228	15	P
3	5720.00	5.13	86.23	91.36	110.80	-19.44	Peak	228	15	P
4	5725.00	5.14	85.29	90.43	122.20	-31.77	Peak	228	15	P
5	5755.00	5.15	98.08	103.23	200.00	-96.77	Average	228	15	P
6	5755.00	5.15	109.64	114.79	200.00	-85.21	Peak	228	15	P
7	11510.00	13.32	31.43	44.75	54.00	-9.25	Average	100	168	P
8	11510.00	13.32	44.86	58.18	74.00	-15.82	Peak	100	168	P

Note: Level=Reading+Factor
Margin=Level-Limit
Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V / 60Hz	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 5, Band 4, CH151		:



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	5.09	59.43	64.52	68.20	-3.68	Peak	189	264	P
2	5700.00	5.12	74.28	79.40	105.20	-25.80	Peak	189	264	P
3	5720.00	5.13	83.23	88.36	110.80	-22.44	Peak	189	264	P
4	5725.00	5.14	88.32	93.46	122.20	-28.74	Peak	189	264	P
5	5755.00	5.15	101.54	106.69	200.00	-93.31	Average	189	264	P
6	5755.00	5.15	114.18	119.33	200.00	-80.67	Peak	189	264	P
7	11510.00	13.32	33.36	46.68	54.00	-7.32	Average	141	100	P
8	11510.00	13.32	46.95	60.27	74.00	-13.73	Peak	141	100	P

Note: Level=Reading+Factor
 Margin=Level-Limit
 Factor=Antenna Factor + cable loss - Amplifier Factor